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Objectives: We compared in-hospital mortality (IHM) and resource utilization among vascular surgical patients at safety net hospitals (SNPHs) with those at nonsafety net hospitals (nSNPHs).

Methods: National Inpatient Sample (2005-2011) was queried to identify surgical patients with peripheral arterial disease (PAD), carotid stenosis (CS), and nonruptured abdominal aorta aneurysm (AAA) based on International Classification of Diseases, Ninth Revision codes. The cohort was divided into SNPH and nSNPH groups using the definition of SNPH by the National Association of Public Hospitals. Characteristics, length of stay (LOS), IHM, and median charges (MC) were compared between the groups. Advanced PAD was defined as PAD patients with rest pain or ulceration. Statistical methods included χ^2 test (categoric variables), *t*-test (continuous variables), gamma regression (LOS and MC), and logistic regression to adjust for confounding variables (IHM).

Results: We identified 306,438 patients operated for PAD, CS, or AAA (Table). Patients at SNPH were younger, had a higher percentage of female and minority patients, and a higher Elixhauser comorbidity index ($P <$ .001). Nonelective admissions were more common among SNPH patients who presented with more advanced PAD and symptomatic CS. Patients at SNPH had significantly higher LOS, MC, and IHM. For SNPH patients, adjusted odds ratio for mortality was 1.28 higher than at nSNPH (95% confidence interval, 1.13-1.46; $P <$ .001).

Conclusions: Vascular surgery patients at SNPH, despite being younger, have higher comorbidities, present more urgently with more advanced vascular disease, and therefore, have costlier care and suffer worse outcome than other cohort. This study suggests an unequal access to preoperative care in these more sociodemographically challenged patients.

Table.

Characteristics			
Demographics and presentation	*SNPH*	*NSNPH*	P
Median age (year)	70	72	<.001[a]
Female (%)	38.3	37.2	<.001[a]
Non-white (%)	27.8	11.5	<.001[a]
Advanced PAD (%)	35.0	35.22	>.05
Symptomatic CS (%)	5.38	3.62	<.001[a]
Nonelective admissions (% of total)	24.7	16.7	<.001[a]
Comorbidities			
CHF (%)	7.6	6.8	<.001[a]
Hypertension (%)	68.2	67.3	.004[a]
Diabetes (%)	32	28.6	<.01[a]
Renal failure (%)	3.8	2.9	<.001[a]
Median charges ($)	35,800	26,715.5	<.001[a]
In-hospital mortality (%)	0.9	0.8	.007[a]

[a]$P <$ .05

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RR29.

Vascular Repair Followed by Tissue Transfer in War Trauma: Differences in Limb Salvage Rates

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Objectives: Combat extremity wounds are complex and frequently require an immediate vascular repair in theater, followed by delayed tissue coverage at a stateside center. This study reviews the outcomes of extremity vessel injury repair followed by definitive tissue coverage during the Global War on Terror.

Methods: Patients who incurred a war-related extremity injury necessitating a downrange vascular procedure, followed by definitive limb reconstruction, from 2003-2012 were reviewed. Patient demographics, types of vascular and extremity injuries, and surgical interventions were examined. Outcomes included limb salvage, primary and secondary graft patency, flap outcomes, and complications. Differences between upper and lower extremities were compared.

Results: Eighty-six male patients (mean age, 24 years) sustained an extremity injury requiring an immediate vascular intervention, followed by delayed definitive reconstruction. Fifty-nine underwent arterial ligation. The remaining 27 extremities (15 lower and 12 upper) required proximal arterial intervention. An explosion was the etiology in 60% of patients with a mean Injury Severity Score of 20. Twenty patients (74%) required an autogenous vein graft. Eight patients (30%) had a concomitant venous injury, and 22 (82%) had a bony fracture.

Early primary and secondary patency rates of the autogenous vein grafts were 65% and 90% and were not different between upper and lower extremities. Limb salvage rates were 66% in the lower extremity and 100% in the upper extremity. Three amputated lower limbs (60%) had a patent arterial bypass. The flap success rate was 96%. Reasons for amputation included arterial thrombosis, flap failure, soft tissue infection, and osteomyelitis.

Conclusions: Immediate vascular repair, followed by delayed tissue coverage, is performed with acceptable outcomes after combat trauma. Limb salvage rates were higher in the upper extremity despite similar graft patency rates. Future studies should focus on attempts to improve lower extremity limb salvage rates.

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RR30.

Long-term Clinical Outcome and Functional Status after Arterial Reconstruction in Upper Extremity Injury

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Objectives: To analyze long-term outcome including functional status in patients after arterial repair of civilian upper limb injury in our institution.